

AMENDMENTS TO THE CLAIMS:

Please amend claims 1, 5 and 9. Please cancel claim 33 without prejudice or disclaimer. Please add claim 34. This listing of claims replaces all prior versions, and listings of claims, in the application.

LISTING OF CLAIMS:

1. (currently amended) A method for detecting or determining delivery and expression of a nucleic acid introduced into a cell comprising:

introducing ~~intact and condensed~~ labelled large nucleic acid molecules that encode a reporter gene into cells, wherein the labelled large nucleic acid is labelled with a label selected from the group consisting of a nucleotide analog, a nucleoside analog and a ribonucleoside analog ~~wherein the nucleic acid molecules remain intact and condensed after delivery;~~

detecting labelled cells as an indication of delivery of the nucleic acid into a cell; and
measuring the product of the reporter gene as an indication of DNA expression in the cell, whereby delivery and expression of nucleic acid molecules in the cell is detected or determined.

2. (original) The method of claim 1, wherein the labelled cells are detected by flow cytometry, fluorimetry, cell imaging or fluorescence spectroscopy.

3. (previously presented) The method of claim 1, wherein the labelled cells are detected by flow cytometry.

4. (original) The method of claim 1, wherein the nucleic acid molecule is DNA.

5. (currently amended) ~~The method of claim 1,~~ A method for detecting or determining delivery and expression of a nucleic acid introduced into a cell comprising:
introducing labelled large nucleic acid molecules that encode a reporter gene into cells, wherein the label is iododeoxyuridine (IdU or IdUrd) or bromodeoxyuridine (BrdU);
detecting labelled cells as an indication of delivery of the nucleic acid into a cell; and
measuring the product of the reporter gene as an indication of DNA expression in the cell, whereby delivery and expression of nucleic acid molecules in the cell is detected or determined.

6. (original) The method of claim 1, wherein the reporter gene encodes a fluorescent protein, or enzyme or antibody.

7. (original) The method of claim 6, wherein the enzyme is a luciferase, β -galactosidase or alkaline phosphatase.

8. (original) The method of claim 6, wherein the fluorescent protein is a red, green or blue fluorescent protein.

9. (currently amended) ~~The method of claim 6,~~ A method for detecting or determining delivery and expression of a nucleic acid introduced into a cell comprising:

introducing labelled large nucleic acid molecules that encode a reporter gene into cells, wherein the step of introducing labelled large nucleic acid molecules comprises contacting the nucleic acid molecules with a delivery agent that comprises a cationic compound;

detecting labelled cells as an indication of delivery of the nucleic acid into a cell; and measuring the product of the reporter gene as an indication of DNA expression in the cell, whereby delivery and expression of nucleic acid molecules in the cell is detected or determined.

10. (previously presented) The method of claim 9, wherein the compound is selected from the group consisting of N-[1-(2,3-dioleyloxy)propyl]-N,N,N-trimethylammonium chloride (DOTMA), dioleoylphosphatidylethanolamine (DOPE), 2,3-dioleyloxy-N-[2(spermine-carboxamido)ethyl]-N,N-dimethyl-1-propanaminiumtrifluoroacetate (DOSPA), $C_{52}H_{106}N_6O_4 \cdot 4CF_3CO_2H$, $C_{88}H_{178}N_8O_4S_2 \cdot 4CF_3CO_2H$, $C_{40}H_{84}NO_3P \cdot CF_3CO_2H$, $C_{50}H_{103}N_7O_3 \cdot 4CF_3CO_2H$, $C_{55}H_{116}N_8O_2 \cdot 6CF_3CO_2H$, $C_{49}H_{102}N_6O_3 \cdot 4CF_3CO_2H$, $C_{44}H_{89}N_5O_3 \cdot 2CF_3CO_2H$, $C_{41}H_{78}NO_8P$, $C_{100}H_{206}N_{12}O_4S_2 \cdot 8CF_3CO_2H$, $C_{162}H_{330}N_{22}O_9 \cdot 13CF_3CO_2H$, $C_{43}H_{88}N_4O_2 \cdot 2CF_3CO_2H$, $C_{43}H_{88}N_4O_3 \cdot 2CF_3CO_2H$ and (1-methyl-4-(1-octadec-9-enyl-nonadec-10-enylenyl)pyridinium chloride.

11. (previously presented) The method of claim 1, wherein the nucleic acid molecules are natural chromosomes, artificial chromosomes, fragments of a chromosome or naked DNA that is greater than at least about 0.6 megabase in size.

12. (original) The method of claim 1, wherein the nucleic acid molecules are artificial chromosomes, plasmids, chromosome fragments, naked DNA, or natural chromosomes.

13. (previously presented) The method of claim 1, wherein the nucleic acid molecules are artificial chromosome expression systems (ACes).

14. (original) The method of claim 1, wherein the cells are eukaryotic cells.
15. (previously presented) The method of claim 14, wherein the cells are primary cells, cell lines, plant cells, or animal cells.
16. (previously presented) The method of claim 14, wherein the cells are stem cells, nuclear transfer donor cells, tumor cells or transformed cells.
- 17.-29. (cancelled)
30. (previously presented) The method of claim 1, wherein the cell is selected from the group consisting of a primary cell, an immortalized cell, an embryonic cell, a stem cell, a transformed cell and a tumor cell.
- 31.-32. (cancelled)
33. (cancelled)
34. (new) The method of claim 1, wherein the label is a thymidine analog.